General

Guideline Title

Rheumatoid arthritis: diagnosis, management and monitoring.

Bibliographic Source(s)

Medical Services Commission. Rheumatoid arthritis: diagnosis, management and monitoring. Victoria (BC): British Columbia Medical Services Commission; 2012 Sep 30. 7 p. [12 references]

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

Diagnosis

The approach to care of patients with rheumatoid arthritis (RA) can be considered as falling into two groups.

- Early RA (ERA) is defined as patients with symptoms of less than 3 months duration.
- Patients with established disease who have symptoms due to inflammation and/or joint damage.

Early RA Investigation

Differentiate Inflammatory from Non-inflammatory Arthritis

The treatment approach varies depending on whether the symptoms arise from inflammation or joint damage, making the differentiation vital.

Feature	Inflammatory	Non-Inflammatory
Joint pain	With activity and at rest	With activity
Joint swelling	Soft tissue	Bony
Local erythema	Sometimes	Absent
Local warmth	Frequent	Absent
Morning stiffness	>30 minutes	<30 minutes
Systematic symptoms	Common, especially, fatigue	Absent

Differentiate RA from Other Inflammatory Arthritides

RA Likely	Differential Diagnosis	Features Suggesting Alternative Diagnosis
• Morning stiffness >30 minutes • Painful swelling of 3 or more joints • Symmetric involvement of hands and feet (especially metacarpophalangeal and metatarsophalangeal joints) • Duration of 4 or more weeks	• Crystal arthropathy • Psoriatic arthritis • Lupus • Reactive arthritis • Spondyloarthropathies • Polyarticular sepsis	• Mucosal ulcers, photosensitivity, psoriasis, skin rashes • Raynaud's • Ocular inflammation – iritis/uveitis • Urethritis • Inflammatory bowel disease • Infectious diarrhea • Nephritis • Isolated distal interphalangeal joint inflammation

Note that extra-articular manifestations are an indication of more severe disease and thus have prognostic value.

Investigations

RA is a clinical diagnosis. Referral to a specialist should not be based on the results of lab tests if there are no clinical features suggesting RA. There are no tests that can reliably make the diagnosis of RA. If there are clinical features then the following lab tests may be useful for monitoring and ruling out other types of arthritis.

Tests*	Diagnostic Value	Disease Activity Monitoring
C-Reactive Protein (CRP) or Erythrocyte Sedimentation Rate (ESR)	CRP is the preferred test (BC Biomedical Laboratories Ltd., 2010; Best Practice Advocacy Centre New Zealand, 2005). Indicate only inflammatory process - very low specificity	May be useful in monitoring disease activity and response to treatment. Both can be useful, but CRP is more sensitive to short term fluctuations. ESR elevated in many but not all with active inflammation.
Rheumatoid Factor Latex Test (RF)	RF has low sensitivity and specificity for RA. Seropositive RA has a worse prognosis than seronegative RA.	No value - do not repeat
Antinuclear Antibody (ANA)	ANA is rarely positive in RA. Unless there are other clinical features indicating systemic lupus erythematosus (SLE) or other connective tissue diseases, ordering ANA is not indicated (British Columbia Guidelines and Protocols Advisory Committee, 2007).	No value - do not repeat
X-Rays	Diagnostic erosions rarely seen in disease of <3 months duration.	If clinically indicated, serial x-rays over years may show disease progression and indicate need for medication change.
Joint Aspiration	Joint aspiration indicated if infection or crystal arthropathy is suspected. Antibiotics may be started only after aspiration.	

*Anti-cyclic citrullinated protein antibodies (anti-CCP) may have some value but can only be ordered by a specialist in British Columbia. If ordered by a general practitioner (GP) then the test is patient pay.

Management

Referral to Specialists

- Specialist intervention has been shown to improve RA outcomes. Referrals to specialists should indicate "Urgent: new-onset RA". Copy all relevant tests to specialist.
- Referral to physiotherapist (PT) and/or occupational therapist (OT) with expertise in RA and indicate "Urgent: new-onset RA".

Management of Early RA

Before patient's specialist appointment initiate treatment as follows:

- Patient education: provide attached RA patient guide.
- Start nonsteroidal anti-inflammatory drugs (NSAIDs) and acetaminophen for pain management having recorded blood pressure and ordered baseline complete blood count (CBC), creatinine, electrolytes and chest x-ray.
- Can start with:
    - Hydroxychloroquine (O'Dell et al., 2002; O'Dell, 2004; "A randomized trial," 1995) until diagnosis of RA is confirmed (see Appendix A, Non-Biologic Disease-Modifying Anti-rheumatic Drugs [DMARDs], in the original guideline document)
      OR
    - Sulfasalazine and methotrexate if confident about diagnosis and in using these medications (see Appendix A, Non-Biologic Disease-Modifying Anti-rheumatic Drugs [DMARDs], in the original guideline document). Combination DMARD therapy is the current standard of care.
- If symptoms are severe add low-dose prednisone (up to 10 mg/day).

Consider seeing early RA patients monthly to monitor response to treatment and possible side effects of medications (Bykerk et al., 2011). Contact specialist if concerned.

There are currently at least nine biologic medications approved for treatment of RA. They will be initiated only by specialists. As such, detailed review of this drug class is beyond the scope of this guideline. Details of initiation, dosing and monitoring are based on recommendations made by specialists in each case.

Management of Established RA

The objective of treatment is to suppress all inflammation and prevent joint damage. Most patients will require long-term DMARD therapy.

Consider follow-up every 3-6 months and specialist follow-up every 6-12 months after inflammation is suppressed (Bykerk et al., 2011).

At each visit:

- Assess current drug therapy including dose and monitoring for side effects (see Appendix A, Non-Biologic Disease-Modifying Anti-rheumatic Drugs [DMARDs], in the original guideline document)
- Examine joints for active inflammation (if necessary review clinical features)
- When baseline CRP or ESR is elevated, serial assessment may be helpful
- Review general health concerns and co-morbidities

If the assessment suggests ongoing active inflammation, then consider or review:

- Adherence to medication regimen
- Dosage of current medications and dosages of substitutions/additions of alternative medications
- Referral back to specialist
- Referral back to PT and/or OT

If the assessment suggests joint damage, then consider or review:

- Pain relieving modalities
- Re-referral to PT and/or OT
- Referral for surgical opinion

Always take into account that patients may have a combination of inflammation and damage.

Consider Implications of Chronic Disease

Optimal outcome is achieved through a multi-disciplinary approach coordinated by the primary care physician.

Consider or review:

- Implications of chronic pain
- Psychosocial issues

- Immunizations (flu vaccine, pneumococcal polysaccharide vaccine [PPSV])
- Osteoporosis assessment and preventive measures.
- Patients with RA have an increased risk of cardiovascular disease (CVD) compared with the general population. Aggressive treatment of RA disease activity may minimize the cumulative burden of inflammation. Traditional CVD risk factors (e.g., cholesterol levels, blood pressure) should also be carefully screened and managed in this patient population.
- Encourage self-management for RA symptoms
- Smoking cessation (smoking directly aggravates RA)
- Weight management. See the Medical Services Commission, British Columbia guideline Overweight and Obese Adults: Diagnosis and Management .

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Rheumatoid arthritis (RA)

Guideline Category

Diagnosis

Evaluation

Management

Treatment

Clinical Specialty

Family Practice

Internal Medicine

Rheumatology

Intended Users

Occupational Therapists

Physical Therapists

Physician Assistants

Physicians

Guideline Objective(s)

To aid in early recognition, intervention and management of patients with rheumatoid arthritis (RA)

Target Population

Patients 16 years of age and older with early or established rheumatoid arthritis (RA)

Interventions and Practices Considered

Diagnosis

1. Differentiation of inflammatory from non-inflammatory arthritis
2. Differentiation of rheumatoid arthritis (RA) from other inflammatory arthritis
3. Lab and imaging tests (along with clinical features)
    - C-reactive protein (CRP) or erythrocyte sedimentation rate (ESR)
    - Rheumatoid factor latex test (RF)
    - Antinuclear antibody (ANA)
    - X-rays
    - Joint aspiration

Management/Treatment

1. Referral to specialists
2. Patient education
3. Nonsteroidal anti-inflammatory drugs (NSAIDs) and acetaminophen for pain
4. Hydroxychloroquine until diagnosis of RA
5. Sulfasalazine and methotrexate if confident about RA diagnosis
6. Low-dose prednisone
7. Monthly visits to monitor response
8. Long-term disease-modifying anti-rheumatic drug (DMARD) therapy
9. Follow-up
    - Assess drug therapy
    - Examine joints
    - Serial assessment if CRP or ESR is elevated
    - Review general health concerns and co-morbidities
10. Consideration of implications of chronic disease

Major Outcomes Considered

- Quality of life
- Life expectancy
- Permanent joint damage
- Cardiovascular risk

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Evidence was obtained through a systematic review of peer-reviewed literature (up to June 2012) using the databases MEDLINE, PubMed, EBSCO, Ovid, and the Cochrane Collaboration's Database for Systematic Reviews. Search terms: rheumatoid arthritis, differential diagnosis, treatments, biologics, DMARDs, mono-therapy, combo-therapy, C-reactive protein, erythrocyte sedimentation rate, rheumatoid factor latex test,

antinuclear antibodies, x-rays, joint aspiration, etc.

Clinical practice guidelines from other jurisdictions for rheumatoid arthritis diagnosis, management and treatment were also reviewed (up to June 2012).

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Not stated

Rating Scheme for the Strength of the Evidence

Not applicable

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

This guideline is an evidence-based clinical guideline for general practitioners with consensus statements when evidence is not available. It is based on scientific evidence current as of the Effective Date.

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

This guideline was approved by the British Columbia Medical Association, and adopted by the Medical Services Commission.

Evidence Supporting the Recommendations

References Supporting the Recommendations

A randomized trial of hydroxychloroquine in early rheumatoid arthritis: the HERA Study. Am J Med. 1995 Feb;98(2):156-68. PubMed

BC Biomedical Laboratories Ltd. New MSP laboratory medicine funding agreement. Physicians Newsl. 2010;12:1-3.

Best Practice Advocacy Centre New Zealand (BPAC). CRP vs ESR assessing & measuring the inflammatory response. Dunedin (New Zealand): Best Practice Advocacy Centre New Zealand (BPAC); 2005 Sep. Various p.

British Columbia Guidelines and Protocols Advisory Committee. Antinuclear antibody (ANA) testing for connective tissue disease. Victoria (BC): British Columbia Medical Services Commission; 2007 Mar 12.

Bykerk VP, Akhavan P, Hazlewood GS, Schieir O, Dooley A, Haraoui B, Khraishi M, Leclercq SA, Legare J, Mosher DP, Pencharz J, Pope JE, Thomson J, Thorne C, Zummer M, Bombardier C, Canadian Rheumatology Association. Canadian Rheumatology Association recommendations for pharmacological management of rheumatoid arthritis with traditional and biologic disease-modifying antirheumatic drugs. J Rheumatol. 2011;38:11.

O'Dell JR, Leff R, Paulsen G, Haire C, Mallek J, Eckhoff PJ, Fernandez A, Blakely K, Wees S, Stoner J, Hadley S, Felt J, Palmer W, Waytz P, Churchill M, Klassen L, Moore G. Treatment of rheumatoid arthritis with methotrexate and hydroxychloroquine, methotrexate and sulfasalazine, or a combination of the three medications: results of a two-year, randomized, double-blind, placebo-controlled trial. Arthritis Rheum. 2002 May;46(5):1164-70. PubMed

O'Dell JR. Therapeutic strategies for rheumatoid arthritis. N Engl J Med. 2004 Jun 17;350(25):2591-602. [121 references] PubMed

Type of Evidence Supporting the Recommendations

This is an evidence-based clinical guideline for general practitioners with consensus statements when evidence was not available. The type of supporting evidence is not specifically stated for each recommendation.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Early recognition and intervention for rheumatoid arthritis (RA) has been shown to improve outcome.
- The use of traditional medications in combination and the new biologic therapies have revolutionised the paradigm of RA treatment in recent years. Disease modifying anti-rheumatic drugs (DMARDs), particularly when used early, change the course of the disease and are proven to reduce damage and associated disability.

Potential Harms

Adverse effects of medications (see Appendix A, Non-Biologic Disease-Modifying Anti-rheumatic Drugs [DMARDs], in the original guideline

document)

Qualifying Statements

Qualifying Statements

The Clinical Practice Guidelines (the "Guidelines") have been developed by the Guidelines and Protocols Advisory Committee on behalf of the Medical Services Commission. The Guidelines are intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. The Guidelines are not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of clinical problems.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Mobile Device Resources

Patient Resources

Quick Reference Guides/Physician Guides

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Medical Services Commission. Rheumatoid arthritis: diagnosis, management and monitoring. Victoria (BC): British Columbia Medical Services Commission; 2012 Sep 30. 7 p. [12 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 Sep 30

Guideline Developer(s)

Medical Services Commission, British Columbia - State/Local Government Agency [Non-U.S.]

Source(s) of Funding

Medical Services Commission, British Columbia

Guideline Committee

Guidelines and Protocols Advisory Committee

Composition of Group That Authored the Guideline

Not stated

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the British Columbia Ministry of Health Web site .

The guideline is also available for mobile devices from the British Columbia Ministry of Health Web site .

Availability of Companion Documents

The following is available:

- Rheumatoid arthritis: diagnosis, management and monitoring summary. Victoria (BC): British Columbia Medical Services Commission; 2012 Sep 1. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the British Columbia Ministry of Health Web site .

In addition, Appendix A in the original guideline document contains more information on non-biologic disease-modifying

anti-rheumatic drugs (DMARDs).

Patient Resources

The following is available:

- Rheumatoid arthritis: a guide for adult patients. Victoria (BC): British Columbia Medical Services Commission; 2012 Sep. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the British Columbia Ministry of Health Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI Institute on February 12, 2013. The information was verified by the guideline developer on March 20, 2013. This summary was updated by ECRI Institute on October 28, 2013 following the U.S. Food and Drug Administration advisory on Acetaminophen. This summary was updated by ECRI Institute on September 18, 2015 following the U.S. Food and Drug Administration advisory on non-aspirin nonsteroidal anti-inflammatory drugs (NSAIDs).

Copyright Statement

Disclaimer

NGC Disclaimer